The Port of Dublin

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Introduction.

My purpose this evening is to tell you something about the Port of Dublin. I shall endeavour to do this in three stages, first I shall touch briefly on its history, then I shall describe the services which are required of a large modern port, and I shall explain to you how the port is organised, controlled, operated and financed, and describe the recent improvement schemes.

In the second stage, I hope with the aid of some pictures to take you on a short visit to the port so that you may see it for yourselves and, finally, in the third stage, I shall put before you some statistics relating to the shipping, trade and financing of the port.

History.

The River Liffey as a natural estuary was probably in use as a port for thousands of years, but changed very little in character until the year 1707. Up to that year the river, when it reached the point where O'Connell Bridge now stands opened into a wide and shallow tidal estuary which, at high tide, formed an unbroken expanse of water stretching from what is now Merrion Square to the area North of Amiens Street, now less appropriately called the North Strand. This expanse of water at low tide became an area of mud flats and sand banks with two or three shallow streams running through it to the sea. At that period the largest vessels which came up the river were about 100 tons dead weight and these had to lie in the mud at low water. This was the virgin ground on which the work of constructing the modern port of Dublin began in 1707.

In that year a committee of the Dublin Corporation was entrusted by Parliament with the responsibility of erecting a ballast office and the duty of maintaining and developing the port was vested in them. The headquarters of the present Dublin Port and Docks Board is still called the Ballast Office and derives its name from the primary duty of that Committee, i.e., the provision of ballast for the sailing ships of that era. This Committee, with the object of containing the river in a well-defined deep channel had by 1786 constructed the great South Wall which runs from a point west of where O'Connell Bridge now stands to the Poolbeg Lighthouse, a distance of about 5½ miles. This was a work of vast proportions and was said to be the longest mole in Europe, in its time. The Committee was succeeded in 1786 by the Corporation for preserving and improving the Port of Dublin known as the Ballast Board, and this Corporation functioned until 1867. It was in this period that the true foundations of the modern Port of Dublin were laid. The North, South and East Walls

were re-built on lower foundations, the channel was dredged, the great North Bull Wall was constructed and Nos. 1 and 2 Graving Slips were built, the present graving dock was constructed and the Transit Sheds were erected on the North Wall. During this period also the Government completed the construction of the Custom House Docks and Warehouses and handed them over to the Port Authority.

It would be quite impossible in the short time at my disposal to deal adequately with the history of the port or the genius of its creators, but I shall give you one illustration. The bar of any port or harbour is the shallowest point in its approach channel. At Dublin the bar is formed by a sandbank extending to the eastward of the Poolbeg lighthouse. At the beginning of the last century the depth over this sandbank at low water was only six feet. The average ship was growing larger in size and deeper in draft and the time was approaching when it might not safely pass the bar save within narrow tidal limits. The Dublin Port Authority of the period gave much time and thought to measures to remedy the situation. Many eminent engineers were consulted and very serious consideration was given to a proposal to construct a canal connecting the deep water at Dun Laoghaire Harbour to the Liffey so as to circumvent the bar. Fortunately this proposal was dropped in favour of one put forward by the Board's own Engineer, George Halpin. He suggested that the Port should construct what is now known as the North Bull Wall so as to impound a great volume of water at high tide. As the tide recedes this water flows out between the Poolbeg and the North Bull Lighthouses, scouring a passage through the bar. This scour cut its own channel and the water at the bar was deepened thereby over the years from 6 to 16 feet. The idea at the time was revolutionary and probably the foremost port engineering work in Europe.

In 1867 the Dublin Port and Docks Board was formed. Work was begun on the North Wall extension, and the deep water berths were constructed at the East Wall and the South side of Alexander Basin. The channel was dredged to a depth of 20 feet from Dublin Bay to the City. In 1898 the Board was reconstituted, and between that date and 1946 considerable improvements were affected to the port, especially in the construction of Alexandra Quay and in land reclamation and the provision of plant, i.e., electric portal cranes, electric capstans, electric lighting and the provision of a 100-ton crane.

In 1946, the Dublin Port and Docks Board was reconstituted under the Harbour's Act of that year and since then it has undertaken what is, in point of time, probably the greatest improvement scheme in the history of the Port.

The Requirements of a Modern Port.

Before describing this scheme of improvement I should like to tell you what is required of a modern port. Any large modern port is a very complicated organisation, but in all the essential principles are the same. As the modern economic unit of sea transport is a large vessel of deep draft, the channel leading to the port must be of sufficient depth to enable her to enter and leave the port safely at nearly all stages of the tide. Such a vessel may cost as much as £500,000 and if she is delayed through lack of water at the bar for four

or five hours her owners will have been prevented from employing her profitably during that period and will, accordingly, have suffered substantial loss. Just imagine, the loss that would be sustained if a factory costing £500,000 had to close down for four or five hours during ordinary working hours with full pay for all hands and all machinery still working.

The port must maintain a pilotage service so that pilots may board visiting vessels to pilot them in the port area. The channel must be buoyed and lighted and provided with fog signals, and it must be regularly surveyed and dredged.

Tugs must be available to assist the larger vessels which are not easily manoeuvred in confined waters. Ample berths must be provided at which the vessels can be securely moored so that they may load or unload cargo. These berths must be equipped with suitable loading and unloading devices. These may include a large crane of 100-tons capacity, banks of 4-ton portal cranes, grain suction plant, mobile cranes, stacking trucks, and other mechanical devices.

Alongside each berth is a campshire or pitch onto which the goods are unloaded, and adjoining this, the Port Authority must provide open quay space for those goods which can be stored in the open pending removal, and a transit shed to accommodate goods which are perishable or dutiable. In these sheds the goods are sorted into the various lots, examined by the Customs and checked out to the owners or in the case of outgoing cargo, assembled for export. The port must also provide space for cargoes of great bulk like coal, timber, grain, fertilisers and oil. Accommodation must also be provided for passengers and suitable arrangements must be made for the handling of livestock. Some commodities—explosives, oil, cotton, jute and chemicals present a major safety problem.

The duties of the Port Authority do not, however, end with those which are directly entrusted to it, and it must so plan and develop the whole surrounding area that sufficient land is made available to public utility companies and private enterprise to enable them to discharge their special functions in relation to the port.

Space must be reserved for the large marshalling yards of the railway companies, and for the road transport terminals. Equally important are the warehouses of the Port Authority and of the merchants, in which goods for import or export are packed, blended, stored and warehoused, pending distribution through the ordinary channels of trade. Facilities must also be avilable for ship repair. Industries which import vast quantities of raw materials or fuel and to which proximity to the port is of paramount importance, must be specially considered, and indeed not the least of the problems of a large modern port is the equitable distribution of land, accommodation and services between competing interests such as these.

Port operation.

In nearly all ports the work of loading or unloading ships is carried out by private enterprise through the agency of stevedores, employed by the shipping companies or their local agents. This is the practice in Ireland and dockers are not, therefore, employees of the port. In Dublin, however, nearly all other port facilities are provided and maintained by the Port Authority, possibly to a greater extent than

in any comparable port in Europe or America. The Dublin Port Authority not only maintains the approaches to the port, the quays and jetties, transit sheds and cranes, but also the pilotage service, the towage service, the port police force, the largest warehousing undertaking in the country, and a traffic department exercising supervision over the flow of port traffic.

This development, however, is not new or the result of any deliberate policy to extend the activities of the Port Authority. On the contrary the Board, controlled largely by business men, has always adopted the policy of refraining from any activity if private enterprise could do it efficiently. These services therefore, have been undertaken almost invariably at the request of private enterprise because the shipowners and merchants were prepared to rely on the Port Authority as a kind of co-operative agency.

Control of the Port.

The control of the port up to 1946 was provided for by the Board's private Acts. These in many respects continue to operate but substantial changes were effected by the Harbours Act of 1946, which gave to the Minister for Industry and Commerce, in relation to Harbour Authorities, the broad functions exercised by the Minister for Local Government in relation to Local Authorities.

The Minister.

The sanction of the Minister is required, therefore, to rates of charges, bye-laws and borrowing. He is empowered to appoint auditors, to prescribe qualifications for any office and to determine the method of appointment of officers. He has, moreover, the power to remove a member of a Harbour Board, or the entire Board, and to appoint Commissioners in their place if he is satisfied after enquiry that it is necessary in the public interest. The 1946 Act, however, while reserving to the Minister adequate power to safeguard the public, aims at giving the Harbour Authority the maximum autonomy, and the successive Ministers and their officials have implemented the Act in that spirit. The Board has never had any reason to complain of any undue interference or restriction of its activities by the Ministry, and, on the contrary, is indebted to it for many valuable contributions to its work.

The Board.

Subject to the authority reserved to the Minister, the port is controlled by the Dublin Port and Docks Board which consists of twenty-three members, five appointed by the Dublin Corporation, four by the Dublin Chamber of Commerce, two by the livestock trade, two by the Federation of Irish Manufacturers, two by the Congress of Irish Unions, four elected by Shipping interests and four nominated by the Minister for Industry and Commerce. This method of constituting the Board has resulted in a Board of very high quality. The members are keenly interested in the Port and do not spare themselves in its service. Most of the work of the Board is done in the Committees, but the reports of these Committees are confirmed at public Board meetings held twice monthly. The spirit of co-operation which animates the individual members of the Board, and

the confidence which they are prepared to repose in the chairman and vice-chairman and the committees are important factors in securing the rapid and efficient discharge of business. Many members of the Board have, of course, invaluable knowledge and experience of commerce and shipping. This appreciation of the Board is not intended only as a well deserved tribute to the members but also to stress the very important results achieved by constituting the Board in this way making the members answerable to representative bodies who are concerned to send worthy members to the Board and who can judge of the value of their work.

I have, in fact, been so much impressed by that form of constitution that I have wondered whether there is not much to be said for extending it in some measure, to other fields.

The General Manager.

The general manager is the chief executive officer under the Board. Under the Act he has the right to attend meetings of the Harbour Authority and to take part in the discussions at such meetings as if he were a member, but he is not entitled to vote. Subject to the Board, he has control of all the officers and servants of the Harbour Authority and special functions in relation to the latter. Under the general manager there are five heads of departments.

Secretarial Department.

The Secretary acts as Secretary to the Board and the Committees and is responsible for implementing in detail such administrative decisions of the Board and of the general manager as are not dealt with by the heads of the other departments. The department has important duties in relation to staff, property, records, bye-laws etc. He is a very senior and experienced officer of the port.

Engineering Department.

The Engineer's department is by far the largest department of the Board. He is responsible for the hydragraphic survey and dredging of the port, the maintenance of miles of quays and acres of port buildings, roads, bridges and railways, drydocks and slipways, cranes and other plant and machinery. Unlike most maintenance engineers the Engineer-in-Chief of the Port of Dublin has always played a very big part in the major works of improvement of the port and recent years have been no exception to this. His department contains more than one hundred categories of employees. Each year the graduates of the two Dublin Universities, who take the highest places in their respective examinations, are given the privilege of entering the Board's service as pupil engineers.

Harbour Department.

The Harbour Master, who is a highly qualified and experienced professional seaman, controls the day to day movement of all shipping in the port. His department allocates berthage, transit shed space, dock and dry-dock facilities, tugs, cranes and mechanical aids. He is in charge of the harbour police and is also superintendent of pilotage. The Traffic Department, which has its own superintendent, also comes under his administration. He is responsible for the enforcement

of bye-laws, and in this connection has considerable authority under statute. He may at times be called upon to take decisions of vital importance to the safety and good working of the port.

Warehousing Department.

The Board maintains, as an auxiliary service to the port and separately administered, a very large warehousing department which has its headquarters in the original Custom House Docks. This department is in the charge of a manager. Some idea of its size and the magnitude of its operations can be gained by the fact that the plus duty value of the commodities warehoused by the Board at present would probably be as much as thirty million pounds. For example, nearly all the tobacco consumed in the country is held in the Board's bonded warehouses until required for manufacture by the tobacco companies. Many wine and spirit importers warehouse their goods with the Board, and nearly all the tea imported into this country is warehoused by the Board pending distribution to the trade. The problems involved in this undertaking can be appreciated when it is understood that in pre-war days tea was shipped from India to London, warehoused there and sent to this country as required in small lots. To meet this new problem the Board has had to provide warehouse accommodation equal to the addition of nearly 50% of its pre-war accommodation. In addition, the Board warehouses an unending variety of other commodities, and carries out in relation to them such operations as gauging, sorting, packing, blending, etc.

Accounts and Rates Department.

The financial affairs of the Board are administered by the Department of the Accountant and Collector of Rates. The Board's main income is derived from two sources, the assessment of dues on ships, which are paid according to the tonnage of the vessel, and the assessment of dues on goods imported or exported. These are based on a schedule of charges approved by the Minister. Other income is derived from warehousing, transit shed rents, towage, haulage, tugs, leasing of port property, graving dock dues, etc. The Board is self-supporting, and in recent years has made substantial surpluses, all of which have been ploughed back into the improvement of the port. Much of the Board's accounting operations have been mechanised in the past three years, and this has made possible the development of a costing system which has proved to be a very effective aid to management.

Pilotage Service.

The Dublin Port and Docks Board is the Pilotage Authority, but the management of the service is delegated to the Pilotage Committee consisting of representatives of the Board and of the pilots. The decisions of the Committee on financial matters are subject to the approval of the Board. The Committee derives its income from the fees paid by shipowners for pilotage services, and after paying for the upkeep of the pilotage vessel and other expenses, the pilots are remunerated on a basis which provides for a weekly allowance and a limited share.

Recruitment of Staff.

Under the Harbours Act, 1946, the Local Officers and Employees Act of 1926, which created the Local Appointments Commission, is made applicable to certain senior officers in the harbour service. These offices are, therefore, filled by the Local Appointments Commission unless promotion is approved. Clerical officers are recruited by competitive examination. There are also many senior and responsible grades amongst the employees of the port and these positions are normally filled by promotion of the existing staff. In many cases the Port of Dublin service would be the only suitable training ground in the country for such men. The recruitment or dismissal of employees as distinct from officers is a statutory function of the General Manager.

Post War Development of the Port.

The magnitude of a port can be measured by various standards which must be related to one another. One standard is the total net register tonnage of vessels using the port in any one year, i.e. the maximum cargo carrying capacity of the ships as distinct from the actual cargo carried. But a ship of 10,000 tons register may bring only 1,000 tons of goods to the port (part cargo). Still she requires a berth suitable for a 10,000 ton ship whether she carries 1,000 or 10,000 tons and consequently the total register tonnage is important in computing pilotage, tugs, and berthage requirements.

The magnitude of a port can be judged also by the actual tonnage of goods imported or exported but one must look to the character of the goods, whether general cargo or bulk, such as coal, oil, grain, fertiliser, timber, each requiring as it does a different kind of service. A port which has to cater for all of these commodities would be a much larger and more complex organisation than a port which might handle a considerably larger tonnage of one bulk commodity only, such as coal.

Since the inception of the modern Port of Dublin in the early eighteenth century, save in the periods of the Great Wars, there has been a steady increase in the volume of trade. Up to 1905, however, the port was mainly used by coastal vessels trading with Britain, but since then there has been a slow but steady increase in the overseas trade. The greatest change, however, was effected during the recent War which dislocated the ordinary channels of trade and led to a redistribution of world commerce. In the same period the tendency towards the use of the larger ship was considerably accentuated. All this resulted in an extraordinary increase in the net register tonnage of vessels from overseas so that by 1952 it had become practically double that of 1939. Owing to the number of part cargoes, this did not, of course, mean a proportionate increase in the tonnage of goods. 1952 also showed an increase, though much smaller, in the net register tonnage of coastal shipping. There was in the same period a substantial increase in the overall tonnage of goods handled in the port, and a considerable change in the make-up of the trade.

Some of this increase in overseas tonnage was no doubt of a temporary nature due to such factors as restrictions in British coal supplies, Marshall Aid, and currency restrictions. A return to more normal conditions and new developments such as the creation of

the large British Oil Refineries tend to swing the pendulum back to coastal trade, but as far as can be judged, much of the increased overseas register tonnage may be retained.

The development of direct trading, leading as it does to the advantages of wholesale purchasing, the elimination of double handling, and the carrying out of certain processes in this country is no doubt of considerable benefit to the country but allied to the general tendency towards the use of ships of deeper draft, it created serious problems for the Port of Dublin, which the improvement schemes were designed to solve.

Berthage.

In 1939, most of the berthage in the port was suitable only for vessels of comparatively shallow draft, and while deep water berthage had been provided in Alexandra Basin, it was proving insufficient for the pre-war level of trade, and the Ocean Pier project had been adopted, but work had barely started when the War broke out. The existing berthage, therefore, proved totally inadequate to cater for the vast increase in the number of large ships in post-war years and consequently the Board's improvement scheme provided for the construction of the Ocean Pier, and in all increasing the deep water berthage (berthage for a vessel of over 26 ft. draft) five-fold as compared with 1939, at a cost of £1,050,000.

Transit Sheds.

The increase in the number of protective tariffs, involving much more expensive Customs examination, had already created the need for additional transit shed accommodation by 1939. This was accentuated by the increased volume of general cargo in 1946, and in addition the new general cargo berths have to be provided with transit sheds. Under the improvement scheme the Board has, therefore, made provision for a considerable increase in transit shed accommodation, and has in fact already achieved a 50% increase as compared with accommodation available in 1939.

The expression " Transit Shed " is the vernacular but is rather a misnomer, as one of these sheds may cost as much as £90,000, and the total cost of the additional transit shed accommodation is estimated at £713,000.

Deepening the Bar.

I have explained that the bar to a harbour is the shallowest point in its approach channel, and that at Dublin, the bar consists of a sand bank lying to the Eastward of the Poolbeg Lighthouse. It measures approximately $1\frac{1}{2}$ miles by $\frac{1}{4}$ mile. In 1939, the depth over this bar at low water was 21 feet. So as to cater for the increased draft of vessels the Board decided to deepen the bar by two feet and for this purpose placed a dredging contract with a Dutch firm. This work, which took two years, was completed in 1951 at a cost of £166,000. The water over the bar is now at least 23 ft. at low water and varies from 33 ft. to 36 ft. at high water. This permits of the safe movement of large ships in and out of the port over a greater range of tide and consequently of their more economical employment.

Cranes and Mechanical Aids.

The main aim of a good port is the quick turn-round of ships and this requires efficient mechanical handling. The chief mechanical unit in Dublin is the 4-ton portal crane. In 1939, the port had twenty of these and five smaller cranes in addition to the 100-ton crane. To provide for the increased trade, to equip the new berths and to replace obsolete cranes, the Board has recently purchased thirty-three 4-ton, three 6-ton, and two 10-ton cranes at a cost of £437,000. Nearly all of these cranes have been erected and are in service. Mobile cranes and stacking trucks have also been acquired by the Board. The available cranes have, therefore, been increased by more than 100%.

Oil Zone.

The quantity of oil imported into the Port of Dublin has more than doubled as compared with 1939, necessitating additional storage area to accomodate the tanks into which this oil is off-loaded pending distribution. The Board has, therefore, created on reclaimed land a new oil zone consisting of about 40 acres, and sites have been leased to the Oil Companies, who have already made substantial progress in the erection of storage tanks. The zone is capable at full development of accommodating over 50 million gallons. At the same time the Board, for safety reasons, has decided to discontinue the practice whereby tankers are allowed to discharge oil in the general cargo area and two special tanker berths were constructed at the oil zone. These not only serve the new oil zone, but are being connected by common user oil pipe lines to the 1939 installation, thus ensuring a higher standard of efficiency and safety in the handling of petrol and oil. The cost of these berths is included in the figure quoted for berthage above.

The cost of the common user oil pipe scheme, about £100,000 is being borne by the Companies and the Board in the proportion two to one.

Graving Dock.

It is important that a large port should offer adequate repair facilities to ships, and repairs to the underwater portion of a vessel are usually possible only in a dry or graving dock.

In 1939, the Board had only one such dock, completed in 1861, and measuring 377 ft. by 70 ft. While this had in its time rendered, and continues to render, good service it was not capable of servicing the average large modern ship which now trades to the port. To accommodate this type of ship, the Board has placed a contract for the construction of a new graving dock measuring 630 ft. by 80 ft. It is hoped that this dock will be completed in 1956. The cost will be between £1,100,000 and £1,200,000.

Warehousing.

As I have already explained, the Board operates as a separate undertaking the largest warehousing business in this country. Prior to 1939, many commodities were brought to British ports from overseas, warehoused there, and then sent to Ireland in small lots by coastal vessels. The development of direct trading, however, carrying with

it the need to warehouse in this country created a considerable demand for warehouse accommodation, some of which was filled by private enterprise, i.e. by importers and by private warehousing undertakings. The Board, however, found it necessary to expand its own warehousing accommodation by the purchase of any existing warehouses which became available and by building a warehouse near the deep water berths at a cost of £450,000, probably the largest warehouse erected in these islands since the War. It has a total covered floor area of 6 acres. Two other new warehouses are now being planned, one in the Custom House Docks and another in the deep water area. These will cost an additional £400,000.

Other Projects.

In addition to these major works, many minor works of improvement were carried out within the same period. Obsolete plant was replaced and many new items of equipment purchased. These items involved an expenditure of nearly £500,000.

Finance.

The Board is indebted to the successive Ministers for Industry and Commerce for the interest they have always taken in the improvement of the Port, resulting in the award of Government grants to the extent of £1,377,000. If the Ministers for Industry and Commerce have given, however, the Ministers for Finance are taking away as the Board is exceptionally unfortunate in the matter of Income Tax which will become a more and more serious burden. The situation is largely due to the fact that by far the greater part of the Board's capital expenditure is incurred on piers, jetties, graving docks, and transit sheds, in respect of which no depreciation allowances are made. The result of this is that the Board has in effect not only to defray the net cost of such a work, but as it must be paid for out of tax borne revenue to provide in addition an amount equal to 60% thereof to be transferred to the Government in Income Tax. Under general Income Tax law in Britain, depreciation allowances are made on such structures, and British ports are thus given relief. The Board considers that Income Tax should not be levied on any Public Authority which is compelled by law to give service irrespective of profit, and that it should be relieved of tax as a Local Authority is in effect. The Minister for Finance, however, has not yet been converted to that view.

There has been no general revision of port charges since 1943, but the port has earned in the period 1946/54 revenue surpluses amounting to £1,114,682. These added to the Government grants make it possible for the Board to defray 50% of the cost of the improvement schemes, leaving £2,500,000 to be borrowed to meet the total expenditure thereon of about £5,000,000.

In recent years, with rising wages and the increasing cost of materials, the surpluses on the revenue account have been reduced, but they are still appreciable and were it not for the increasing income tax burden, which must arise out of the increasing provision for the repayment of loans, the Port could look forward not only to maintaining itself, but even to carrying the increasing burden of interest and debt repayment in its stride, assuming trade continued at a reasonable level.

Conclusion.

As these improvement schemes, therefore, near completion the Port of Dublin is emerging as an ocean terminal which can bear comparison with any port of its size in the world, with port installations good, and extensive plant and mechanical aids modern and adequate, and port workers in nearly all commodities achieving a turn round of ships better than anything that can be reached in these islands.

Other Irish ports have complained from time to time that trade tends to grow in Dublin at their expense. If that is true, it is not due to any desire on the part of the Dublin Port Authority to deprive any other Irish port of its fair share of trade, nor can it be said to be the fault of the successive Governments, who in general have given to other Irish ports proportionately much larger grants than they have given to Dublin. In fact, any change that may have taken place is due to world trade conditions outside the control of this country. Whether we like it or not, ships are growing larger and deeper in draft. They have much greater cargo-carrying capacity. They are also very much more expensive to build. Such a transport unit can operate very efficiently, but only if it is handling a comparatively large volume of cargo at each port.

Usually, it is only at or for a large port that this volume of trade is on offer, and at such a port the volume of shipping makes it possible to provide more economically the complex services required by such a ship. The question, therefore, was not whether Dublin would gain at the expense of other Irish ports, but whether the British ports would handle ocean trade for Ireland or whether an Irish port could be built up economically to the status and capacity of an ocean terminal for all kinds of cargo. While other ports in the State could and will, I hope, continue to handle certain overseas tonnage, Dublin was the only port which had the necessary volume of trade, to finance full scale development. It had already a considerable advantage over other ports in the State in the extent of its development and the variety of its services. It is the centre of trade, of population and of the Railway system, and the focal point in relation to the British ports. These were the considerations which were in the minds of the members of the Dublin Port and Docks Board in launching the improvement schemes and not any desire to take trade away from any Irish port, and I know that if there is any way in which the Board could assist other Irish ports by the development of traffic with them, it would gladly co-operate in such an undertaking.

DISCUSSION.

Mr. P. Callinan : I have listened with interest to Mr. Hegarty's paper on the subject of Dublin Port and Docks. I have written in the press some months ago that the rapid growth of Dublin's trade and population in recent years was due to its port installations more than to any other single factor, and jestingly suggested to those who moaned at the rapid growth of the capital city, that there was an easy solution to prevent the capital's growth in the blowing up of its port and docks installations. Another correspondent, who agreed with my view as to the influence of the port, suggested that Cork,

Limerick and Waterford, by modernising their ports to the extent Dublin has done, would secure prosperity and growth to the same extent. I doubt however, whether this country can afford more than one really first-class port. If other small countries have more than one first-class port, it is because these ports serve hinterlands beyond their national frontiers. In Denmark the port of Copenhagen monopolises much of the country's traffic and the smaller Danish ports appear to cater in the main for specialised traffic, very often catering largely for small ships. It is a pity the River Liffey could not be made navigable for a longer stretch or that the canals could not be readily adapted to connect Dublin with inland centres so as to provide for larger craft.

A young relative of mine, an officer in a Norwegian tanker, whose ship was in the Port of Dublin last autumn, expressed the view that the facilities for discharging oil cargoes were somewhat short of other ports, but from his personal standpoint that delay was appreciated very much as it gave him more time to see Dublin, and more opportunity to his fellow-officers to do shopping. Incidentally these tankers, like most Norwegian ships, are built outside Norway' and are rarely in a Norwegian port, being mainly employed on charter, and when a tanker comes to a British port it may discharge the cargo brought from overseas there and take on another cargo to be distributed in other British and Irish ports.

I note that the administration of the Port is distributed among five departments. There is no provision for an estates officer, and this officer I consider essential in a modern port to deal with the port's land and numerous matters which are outside the scope of the Engineering Department. The cross-Channel port authorities are fully alive to this important function. There are a few other matters I would like to have commented on, but time does not permit, and I must conclude by expressing my personal thanks to Mr. Hegarty.

Dr. Geary : I would like to join with the other speakers in congratulating Mr. Hegarty, not only on the matter, but on the manner of his lecture. The slides particularly must give us a sense of pride of our noble port. One point in the lecture struck me as being specially important, namely, Mr. Hegarty's insistence that the growth of the port has been autonomous, that is to say, all the developments which have taken place were in response to demand. There was no conscious grabbing of traffic from other ports. The growth of the port has proceeded *pari passu* with the general growth of the city, partly as a cause and partly as a consequence. I have little sympathy with those who deprecate the growth of Dublin, which from the population point of view is the only living and growing organism in the State.

In order to compare the trend of shipping in Dublin with the trend in other ports, I have taken out some figures for the period 1924–53 for number of vessels and net registered tonnage which arrived with cargoes. These figures show that between 1924–26 and 1951–53 the annual average arrivals in Dublin increased from 2·0 million tons to 3·2 million tons, while the corresponding figures for all other ports declined from 2·2 million tons to 1·9 million tons. It will be noted that the growth in Dublin was considerably greater than the decline for other ports. Comparing the pre-emergency period, 1936–38, with the present data, annual average tonnage in Dublin increased from 2·3

million tons to 3·2 million tons, while the tonnage arriving at other ports declined from 2·4 million tons to 1·9 million tons. The share of Dublin in the total increased between 1924–26 to 1951–53 from 48½% to 63%. The figures corroborate the point made by the lecturer and by other speakers that the average size of ships has increased considerably during the period in both Dublin and other ports. It is significant, however, that between 1924–26 and 1951–53 the average size nearly doubled (actually 94%) in the case of Dublin but increased by 60% for other ports.

Mr. O'Moore did not agree with Mr. Callinan when the latter stated that the Irish were not a sea-faring people. I am inclined to agree with Mr. O'Moore. Certainly under the former régime very large numbers of young men in the smaller towns and villages on the south coast entered the British Navy or the British Mercantile Marine. I do not know what the situation is nowadays. I should imagine, however, that a tradition extending back over so many years would die hard.